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Management of hemolactia in postpartum jersey crossbred cow

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Abstract

Farmers frequently approaches veterinarians for the treatment of cows producing milk that is reddish due to the presence of blood in milk. A four-year-old Jersey crossbred cow which was maintained at Livestock Farm Complex, Veterinary College and Research Institute, Salem was presented with a history of blood in milk for the past two days. Based on history and clinical sign the case was diagnosed as hemolactia. The cow was treated with Inj. Tranexamic acid @ 5mg/ kg B.WT. IM and inj. Calcium borogluconate plus magnesium and Phosphorus 1ml / kg B.WT. Slow IV, Bol. Serratiopeptidase 2 PO for 7 days. The animal had an uneventful recovery.

Keywords: Cow, postpartum hemolactia, tranexamic acid

Introduction

Farmers frequently encounter the presence of blood in cow or buffalo milk two to three days after calving and suffer from economic loss because it is often rejected by consumers. Hemolactia in lactating dairy cattle is comparatively common in both heifers and multiparous cows (George *et al.* 2008) [3]. There are several causes of blood in milk. The important causes are hemorrhage, systemic microbial infections, feed containing natural toxins or dyes and thrombocytopenia. Leptospirosis is one of the most common causes of bloody milk in dairy animals. In such condition the milk from all four quarters would be red in colour, thick in consistency and contains blood clots and milk clots (Champawat *et al.* 1984) [1]. But in the present case, only the right forequarter is affected. Blood in milk after parturition is common in cows. But the present case reports a successful management of hemolactia in a postpartum Jersey crossbred cow.

Case history and observation

A four-year-old Jersey crossbred cow, maintained at Livestock Farm Complex, Veterinary College and Research Institute, Salem was presented with a history of blood in the milk from the right fore quarter for the past 2 days. On general examination all the vital parameters were within normal limits. Clinical examination of the udder revealed no visible changes. Milk was reddish in nature.

Hemolactia was diagnosed usually based on the clinical sign. The milk sample from the affected quarter was collected in transparent glass container and left undisturbed for a few hours, there was blood clot at the bottom of the glass container, which indicates that the reddish discoloration of milk was due to hemorrhage. Absence of blood clot at the bottom of the glass bottle indicates reddish discoloration might be due to lysis of RBCs.

To rule out mastitis, as a cause of blood in the milk, we performed a surf field mastitis test as described by Muhammad *et al.* (2010) [4]. For this equal quantity of 3% solution of household detergents are mixed with milk sample from each quarter separately. There is no gel formation noticed, which indicates the absence of mastitis.

Treatment and Discussion

The cow was treated with inj. Calcium borogluconate plus magnesium and Phosphorus 300 ml slow IV for three consecutive days. Inj. Tranexamic acid @ 5 mg/kg B.W.T. IM, Bol. Serratiopeptidase @ 2 boluses PO, BID and Inj. Streptopenicillin 5 g IM was administered for five consecutive days. Improvement in the color of the milk was noticed after 5 days (Fig.1).

The treatment was continued for two more days. Intramammary treatment was not done in order to avoid further damage to the teat. Previous report of Venkatesan *et al.* (2017) [7] stated 5 ml of Adrenaline (1:1000) mixed in 20 ml of Normal Saline was infused intramammarily for 3 days to manage hemolactia in coliform mastitis of a transition cow. Venkatesan *et al.* (2019) [8] reported practice of integrative therapy consisting of standard treatment, topical application of ice cubes and 200 gm of curry leaves (*Murraya Koengii*) mixed with 5 lemon fruit (*Citrus limon*) paste given orally twice for 12 days were found to be effective for haemolactia management in transition cows. Calcium has a coagulant effect. Intravenous injection of 300 – 450 ml of calcium

borogluconate plus magnesium and phosphorus was the standard treatment and the treatment may have to be repeated daily for 2- 3 days (Radostits *et al.* 2007) [6]. Tranexamic acid is in a class of medications called antifibrolytics. Tranexamic acid works by blocking the breakdown of blood clots, thereby it prevents bleeding. Injections of coagulants are likely to give better cure rates than calcium borogluconate (Radostits *et al.* 2007; Muhammad *et al.* 2015) [6, 5]. Das *et al.* (2020) [2] reported a successful treatment of hemolactia with parenteral tranexamic acid and intramammary adrenaline. Hence, from the present case, it was concluded that a combination of medications is used for the successful treatment of Haemolactia in a postpartum Jersey crossbred cow.

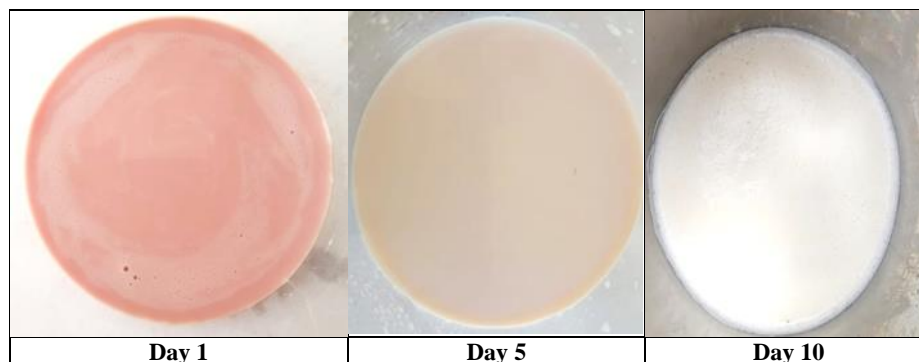


Fig 1: Hemolactia in Jersey crossbred cow (Improvement in the colour of milk from Day 1 to 10)

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